

Aircraft Fuel System Test Rig

CAPABILITY SHEET · FILL · TILT · FEED · WATCH · ENGINEERED TO ORDER

THE ONE IDEA

PRINCIPLE	A fuel system does not fail when the tank runs dry. It fails when a manoeuvre uncovers the pickup for an instant, with fuel still inside.
WHY IT MATTERS	A full, level tank proves almost nothing. A low tank in a demanding attitude is where a pickup is genuinely tested.

THE RIG

TANKS	Tanks or tank simulators built to the aircraft's own geometry, with pumps, cross-feed and shut-off valves.
ATTITUDE	A fixture that tilts the tanks to a chosen climb, dive, bank or sideslip and holds it for the trial.
GAUGING & VENT	Fuel quantity gauging checked against the true state, and a vent system watched on every trial.
RECORD	Instrumentation and data acquisition that read feed, gauging and vent together, on one clock.

THE TEST

ORDER	Mount, fill, tilt, feed, watch, record and repeat. Fuel state and attitude are set together, on purpose.
LIMITS	Every result is set against the customer's own aircraft and fuel-system schematic.

CONFIGURATIONS

SINGLE-TANK RIG	One tank, for feed and gauging.
MULTI-TANK RIG	Several tanks, with transfer and cross-feed.
FULL-SYSTEM RIG	The complete fuel system on a tilting attitude table.

STANDARDS & SCOPE

STANDARDS	14 CFR Part 25 Subpart E and the equivalent CS-25, section 25.951, are the public references for fuel system performance under flight conditions. RTCA DO-160 governs environmental qualification, and ISO/IEC 17025 for calibration.
SCOPE BOUNDARY	This is the rig that proves feed, gauging and venting under attitude. It is not a whole-aircraft systems rig, not a single fuel pump calibration rig, and not a hydrogen fuel system rig.
STATUS	Neometrix engineers aircraft fuel system test rigs to order, and no delivered aircraft fuel system test rig is claimed.

DEFENCE PROGRAMMES DESK

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Descriptions define the equipment class Neometrix engineers to order and are not a quotation. Schematics, states, attitudes and limits are established against the customer's own aircraft at design review. ISO 9001 / ISO 14001. © Neometrix Defence Limited.